

WO 01/25251

PCT/US00/27056

SEQUENCE LISTING

<110> Merck & Co., Inc.

<120> MraY GENE AND ENZYME OF PSEUDOMONAS
AERUGINOSA

<130> PCT 20522

<150> 60/157,580

<151> 1999-10-04

<160> 4

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 1083

<212> DNA

<213> Pseudomonas Aeruginosa

<400> 1

atgctcctgc	tgctggccga	atacctgcaa	cagttctaca	agggtctcgg	cgtcttccag	60
tacctgacct	tgcgcgcat	tctcagcgtg	ctcaccgcgc	tgctgctgtc	gctgtggctg	120
gggccctgga	tgatccgtac	cttgagatc	ccccagatcg	gccaggccgt	gcgcaacgac	180
ggtccgcagt	cgcacctgtc	gaagaagggc	accccgacca	tgggcggcgc	cctgatcctt	240
accgccatag	ccatcagcac	gctgctgtgg	gcggatcttt	ccaaccgcta	cgtgtgggta	300
gtgctggtcg	ttaccctgct	gttcggtgcc	atcggtcggg	tagacgacta	ccgcaagggtg	360
atcgagaaga	actcccgtgg	cctgccgagc	cgttggaagt	acttctggca	gtcgggtgttc	420
ggcatcggcg	cgcgcgtgtt	cctctacatg	actgccgaaa	ccccgatcga	gaccacctg	480
atcgtgccga	tgctgaagag	cgctcagatc	cagttgggca	tcttcttcgt	ggtcctgacc	540
tacttcgtca	tcgtcggctc	gagcaatgcg	gtgaacctca	ccgacgggtc	cgacggcctg	600
gcgatcatgc	cgacggtaat	ggttgccggc	gcgctgggca	tcttctgcta	cctgtcgggc	660
aacgtgaagt	tcgccgagta	cctgctgatt	cccaacgtac	cgggcgcggg	cgagctgac	720
gtgttctgcg	ccgcgctggt	cggcgcgggc	ctcggttcc	tctggttcaa	cacctatccg	780
gcgcaggtct	tcattgggca	cgctcggcgc	ctggcgctgg	gcgccgcgct	gggcaccatc	840
gcggtgatcg	tgcgccagga	gatcgtgctg	ttcatcatgg	gtggggtgtt	cgtcatggaa	900
accctctcgg	tgatgatcca	ggtcgcttcc	ttcaagctga	ccggacgcgc	cgtcttccgt	960
atggcgccga	tccatcacca	tttcgaactg	aaaggctggc	cggaccgcgc	cgtgatcgtg	1020
cgcttctgga	tcattaccgt	gatcctggtg	ctgatcggcc	tcgccacctt	gaagctgcgt	1080
tga						1083

<210> 2

<211> 360

<212> PRT

<213> Pseudomonas Aeruginosa

<400> 2

Met	Leu	Leu	Leu	Leu	Ala	Glu	Tyr	Leu	Gln	Gln	Phe	Tyr	Lys	Gly	Phe
1				5					10					15	
Gly	Val	Phe	Gln	Tyr	Leu	Thr	Leu	Arg	Gly	Ile	Leu	Ser	Val	Leu	Thr
			20					25					30		
Ala	Leu	Ser	Leu	Ser	Leu	Trp	Leu	Gly	Pro	Trp	Met	Ile	Arg	Thr	Leu
			35				40					45			

WO 01/25251

PCT/US00/27056

Gln Ile Pro Gln Ile Gly Gln Ala Val Arg Asn Asp Gly Pro Gln Ser
 50 55 60
 His Leu Ser Lys Lys Gly Thr Pro Thr Met Gly Ala Leu Ile Leu
 65 70 75 80
 Thr Ala Ile Ala Ile Ser Thr Leu Leu Trp Ala Asp Leu Ser Asn Arg
 85 90 95
 Tyr Val Trp Val Val Leu Val Val Thr Leu Leu Phe Gly Ala Ile Gly
 100 105 110
 Trp Val Asp Asp Tyr Arg Lys Val Ile Glu Lys Asn Ser Arg Gly Leu
 115 120 125
 Pro Ser Arg Trp Lys Tyr Phe Trp Gln Ser Val Phe Gly Ile Gly Ala
 130 135 140
 Ala Val Phe Leu Tyr Met Thr Ala Glu Thr Pro Ile Glu Thr Thr Leu
 145 150 155 160
 Ile Val Pro Met Leu Lys Ser Val Glu Ile Gln Leu Gly Ile Phe Phe
 165 170 175
 Val Val Leu Thr Tyr Phe Val Ile Val Gly Ser Ser Asn Ala Val Asn
 180 185 190
 Leu Thr Asp Gly Leu Asp Gly Leu Ala Ile Met Pro Thr Val Met Val
 195 200 205
 Ala Gly Ala Leu Gly Ile Phe Cys Tyr Leu Ser Gly Asn Val Lys Phe
 210 215 220
 Ala Glu Tyr Leu Leu Ile Pro Asn Val Pro Gly Ala Gly Glu Leu Ile
 225 230 235 240
 Val Phe Cys Ala Leu Val Gly Ala Gly Leu Gly Phe Leu Trp Phe
 245 250 255
 Asn Thr Tyr Pro Ala Gln Val Phe Met Gly Asp Val Gly Ala Leu Ala
 260 265 270
 Leu Gly Ala Ala Leu Gly Thr Ile Ala Val Ile Val Arg Gln Glu Ile
 275 280 285
 Val Leu Phe Ile Met Gly Gly Val Phe Val Met Glu Thr Leu Ser Val
 290 295 300
 Met Ile Gln Val Ala Ser Phe Lys Leu Thr Gly Arg Arg Val Phe Arg
 305 310 315 320
 Met Ala Pro Ile His His Phe Glu Leu Lys Gly Trp Pro Asp Pro
 325 330 335
 Arg Val Ile Val Arg Phe Trp Ile Ile Thr Val Ile Leu Val Leu Ile
 340 345 350
 Gly Leu Ala Thr Leu Lys Leu Arg
 355 360

<210> 3
 <211> 29
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> PCR Primer

<400> 3
 ttcatatgct cctgctgctg gccgaatac

29

<210> 4
 <211> 27
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> PCR Primer

<400> 4
 ttggatcctc aacgcagctt caagggtg

27

10/089787

SEQUENCE LISTING

<110> El-Sherbeini, Mohamed
Azzolina, Barbara A.

<120> Mray GENE AND ENZYME OF PSEUDOMONAS
AERUGINOSA

<130> 20522P

<140> 10/089,787

<141> 2002-04-03

<150> PCT/US00/27056

<151> 2000-09-29

<150> 60/157,580

<151> 1999-10-04

<160> 4

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 1083

<212> DNA

<213> Pseudomonas Aeruginosa

<400> 1

atgctcctgc	tgctggccga	atacctgcaa	cagttctaca	agggcttcgg	cgtcttccag	60
tacctgacct	tgcgcgcat	tctcagcgtg	ctcaccgcgc	tgtegtgtc	gctgtggctg	120
gggcccctgga	tgatccgtac	cttgacagatc	ccccagatcg	gccaggccgt	gcgcaacgac	180
ggtccgcagt	cgcacctgtc	gaagaagggc	accccgacca	tgggcggcgc	cctgacccct	240
accgccatag	ccatcagcac	gctgctgtgg	gcggatcttt	ccaaccgcta	cgtgtgggta	300
gtgctggtcg	ttaccctgct	gttcggtgcc	atcggtctgg	tagacgacta	ccgcaagggtg	360
atcgagaaga	actcccgtgg	cctgccgagc	cgctggaagt	acttctggca	gtcgggtgttc	420
ggcatcgggc	ccgccgtgtt	cctctacatg	actgccgaaa	ccccgatoga	gaccaccctg	480
atcgtgccga	tgctgaagag	cgtcgagatc	cagttgggca	tcttcttcgt	ggtcctgacc	540
tacttcgtca	tcgtcggctc	gagcaatgcg	gtgaacctca	ccgacggctc	cgacggcctg	600
gcgatcatgc	cgacggtaat	ggttgccggc	gcgctgggca	tcttctgcta	cctgtcgggc	660
aacgtgaagt	tcgccgagta	cctgctgatt	cccaacgtac	cgggcggcgg	cgagctgatc	720
gtgttctgcg	ccgcgctggt	cggcgcgggc	ctcggtcttc	tctggttcaa	cacctatccg	780
gcgcaggtct	tcatgggcga	cgtcggcgcg	ctggcgctgg	gcgcgcgcgt	gggcaccatc	840
gcggtgatcg	tcgccagga	gatcgtgctg	ttcatcatgg	gtggggtgtt	cgatcatgaa	900
accctctcgg	tgatgatcca	ggtcgcttcc	ttcaagctga	cgggacgcgc	cgtcttccgt	960
atggcgccga	tccatcacca	tttcgaactg	aaaggctggc	cggacccgcg	cgtgatcgtg	1020
cgcttctgga	tcataccgt	gacccctggtg	ctgatcggcc	tcgccacctt	gaagctgcgt	1080
tga						1083

<210> 2

<211> 360

<212> PRT

<213> Pseudomonas Aeruginosa

<400> 2

20522P

```

Met Leu Leu Leu Leu Ala Glu Tyr Leu Gln Gln Phe Tyr Lys Gly Phe
 1          5          10          15
Gly Val Phe Gln Tyr Leu Thr Leu Arg Gly Ile Leu Ser Val Leu Thr
 20          25          30
Ala Leu Ser Leu Ser Leu Trp Leu Gly Pro Trp Met Ile Arg Thr Leu
 35          40          45
Gln Ile Pro Gln Ile Gly Gln Ala Val Arg Asn Asp Gly Pro Gln Ser
 50          55          60
His Leu Ser Lys Lys Gly Thr Pro Thr Met Gly Gly Ala Leu Ile Leu
 65          70          75          80
Thr Ala Ile Ala Ile Ser Thr Leu Leu Trp Ala Asp Leu Ser Asn Arg
 85          90          95
Tyr Val Trp Val Val Leu Val Val Thr Leu Leu Phe Gly Ala Ile Gly
100          105          110
Trp Val Asp Asp Tyr Arg Lys Val Ile Glu Lys Asn Ser Arg Gly Leu
115          120          125
Pro Ser Arg Trp Lys Tyr Phe Trp Gln Ser Val Phe Gly Ile Gly Ala
130          135          140
Ala Val Phe Leu Tyr Met Thr Ala Glu Thr Pro Ile Glu Thr Thr Leu
145          150          155          160
Ile Val Pro Met Leu Lys Ser Val Glu Ile Gln Leu Gly Ile Phe Phe
165          170          175
Val Val Leu Thr Tyr Phe Val Ile Val Gly Ser Ser Asn Ala Val Asn
180          185          190
Leu Thr Asp Gly Leu Asp Gly Leu Ala Ile Met Pro Thr Val Met Val
195          200          205
Ala Gly Ala Leu Gly Ile Phe Cys Tyr Leu Ser Gly Asn Val Lys Phe
210          215          220
Ala Glu Tyr Leu Leu Ile Pro Asn Val Pro Gly Ala Gly Glu Leu Ile
225          230          235          240
Val Phe Cys Ala Ala Leu Val Gly Ala Gly Leu Gly Phe Leu Trp Phe
245          250          255
Asn Thr Tyr Pro Ala Gln Val Phe Met Gly Asp Val Gly Ala Leu Ala
260          265          270
Leu Gly Ala Ala Leu Gly Thr Ile Ala Val Ile Val Arg Gln Glu Ile
275          280          285
Val Leu Phe Ile Met Gly Gly Val Phe Val Met Glu Thr Leu Ser Val
290          295          300
Met Ile Gln Val Ala Ser Phe Lys Leu Thr Gly Arg Arg Val Phe Arg
305          310          315          320
Met Ala Pro Ile His His His Phe Glu Leu Lys Gly Trp Pro Asp Pro
325          330          335
Arg Val Ile Val Arg Phe Trp Ile Ile Thr Val Ile Leu Val Leu Ile
340          345          350
Gly Leu Ala Thr Leu Lys Leu Arg
355          360

```

<210> 3
 <211> 29
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> PCR Primer

20522P

<400> 3
ttcatatgct cctgctgctg gccgaatac

29

<210> 4
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR Primer

<400> 4
ttggatcctc aacgcagctt caaggtg

27